

REMARKS

By this amendment, independent claim 1 has been amended to more clearly set forth the invention. The changes to claim 1 will be discussed in more detail below. Also, claims 3 and 7 have been cancelled. Dependent claims 2, 4, 5 and 6 have been amended so that they are consistent with the language in amended claim 1 and more clearly detail the subject matter of claim 1.

Claims 1-4 were rejected under 35 U.S.C. 103(a) as being unpatentable over Abe et al. (6,952,193).

The Examiner has indicated that claims 5 and 6 would be allowable if incorporated into claim 1. Turning now to amended claim 1, the preamble to this claim has been changed to indicate that the display panel is an active-matrix OLED display panel. As is well understood in the art, in active-matrix devices, each individual OLED element is individually adjusted and is on at the same time. In a passive-matrix device, only the elements in one row at a time are turned on. Applicants note that Abe is a passive-matrix cold-cathode device. Applicants assume that the Abe device is a plasma device. At the outset, Abe is passive-matrix and not OLED. The problem that Abe solves can best be seen in Figs. 5A-5C. A single row is set forth in Figs. 5A and 5B. Fig. 5C shows changes in voltage that occur across the row. The present invention is a current-driven device and not a voltage-controlled device. As shown in Fig. 5C, the voltage drop in a pixel in the row is greatest at Node 2, or in the center of the row. Abe's system is to compensate for this voltage drop. Abe calculates an estimated voltage drop for each element in the row and adds additional data voltage to correct for the calculated voltage drop.

The present invention solves a different problem. As amended, the display setting circuitry includes a multiplier and an adder which are used to set contrast and brightness. Abe does not set contrast and brightness. The gamma correction circuit referenced by the Examiner, in Abe col. 29 lines 50-55, is used to correct for saturation of phosphors used in plasma displays. Such saturation does not occur in OLED displays. Moreover, this does not correct for contrast and brightness. The estimating circuitry estimates the total panel current flowing at a given time in all the pixels. Abe has no such estimating circuit since he is not concerned with all the current flowing through the panel because he uses a voltage-controlled system operative only for a single row at a time. The current

control circuitry of claim 1 uses the panel current estimated by the estimation circuitry and corrects the contrast or brightness based on the panel current estimate.

When the panel current gets too large, damage can be done to the individual OLED elements or to other components of the panel, such as the power supply lines. The present claim 1 is involved with contrast and brightness control by using a current control system that ensures that the actual panel current does not exceed a selected maximum value. There is nothing in any of the cited references which pertains to the problem of current control for an active-matrix OLED display wherein all of the OLED elements are on at any given time. Applicants do not find any motivation in Abe, which is concerned with voltage control on a single row of a plasma display, that would provide any suggestion for providing total current control for an active-matrix OLED display panel.

Applicants believe that claim 1, as amended, clearly sets forth unobvious subject matter that is not disclosed or suggested by Abe.

The remaining claims depend upon claim 1 and should be allowed along with it, as they further detail features of claim 1.

It is believed that these changes now make the claims clear and definite and, if there are any problems with these changes, Applicants' attorney would appreciate a telephone call.

In view of the foregoing, it is believed none of the references, taken singly or in combination, disclose the claimed invention. Accordingly, this application is believed to be in condition for allowance, the notice of which is respectfully requested.

Respectfully submitted,



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If the Examiner is unable to reach the Applicant(s) Attorney at the telephone number provided, the Examiner is requested to communicate with Eastman Kodak Company Patent Operations at (585) 477-4656.